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PTO/SB/05 (2/98)
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No.	1020-0501
First Inventor or Application Identifier	David C. May
Title	Highly Drapable Cover Having...
Express Mail Label No.	EL080826574US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231

1. [X] * Fee Transmittal Form *(e.g., PTO/SB/17)* *(Submit an original and a duplicate for fee processing)*
2. [X] Specification [Total Pages 16] *(preferred arrangement set forth below)*
   - Descriptive title of the Invention
   - Cross References to Related Applications
   - Statement Regarding Fed sponsored R & D
   - Reference to Microfiche Appendix
   - Background of the Invention
   - Brief Summary of the Invention
   - Brief Description of the Drawings *(if filed)*
   - Detailed Description
   - Claim(s)
   - Abstract of the Disclosure
3. [X] Drawing(s) *(35 U.S.C. 113)* [Total Sheets 3]
4. Oath or Declaration [Total Pages]
   a. [ ] Newly executed (original or copy)
   b. [ ] Copy from a prior application (37 C.F.R. § 1.63(d)) *(for continuation/divisional with Box 17 completed)* ***[Note Box 5 below]***
      i. [ ] DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).
5. [ ] Incorporation By Reference *(useable if Box 4b is checked)* The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered to be part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. [ ] Microfiche Computer Program *(Appendix)*
7. Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all necessary)*
   a. [ ] Computer Readable Copy
   b. [ ] Paper Copy (identical to computer copy)
   c. [ ] Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

8. [ ] Assignment Papers (cover sheet & document(s))
9. [ ] 37 C.F.R.§3.73(b) Statement *(when there is an assignee)* [ ] Power of Attorney
10. [ ] English Translation Document *(if applicable)*
11. [ ] Information Disclosure Statement (IDS)/PTO-1449 [ ] Copies of IDS Citations
12. [ ] Preliminary Amendment
13. [X] Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*
14. [ ] * Small Entity Statement(s) *(PTO/SB/09-12)* [ ] Statement filed in prior application, Status still proper and desired
15. [ ] Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
16. [ ] Other: .....

NOTE FOR ITEMS 1 & 14: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

17. **If a CONTINUING APPLICATION,** *check appropriate box, and supply the requisite information below and in a preliminary amendment:*

[X] Continuation [ ] Divisional [ ] Continuation-in-part (CIP) of prior application No: 08/576,112

Prior application information: Examiner K. Choi Group / Art Unit: 1314

18. CORRESPONDENCE ADDRESS

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Name (Print/Type)	Bradford G. Addison	Registration No (Attorney/Agent)	41,486
Signature	Bradford G. Addison	Date	October 5, 1998

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jc618 U.S. PTO 10/05/98

jc533 U.S. PTO 09/166625 10/05/98

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FEE TRANSMITTAL

Patent fees are subject to annual revision on October 1.
These are the fees effective October 1, 1997
Small Entity payments must be supported by a small entity statement, otherwise large entity fees must be paid See Forms PTO/SB/09-12
See 37 C.F.R §§ 1 27 and 1 28

TOTAL AMOUNT OF PAYMENT ($) 395.00

Complete if Known	
Application Number	To be assigned.
Filing Date	Herewith
First Named Inventor	David C. May
Examiner Name	
Group / Art Unit	
Attorney Docket No.	1020-0501

METHOD OF PAYMENT (check one)

1. [X] The Commissioner is hereby authorized to charge indicated fees and credit any over payments to

Deposit Account Number: 13-0014
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[X] Charge Any Additional Fee Required Under 37 C F R. §§ 1 16 and 1 17
[ ] Charge the Issue Fee Set in 37 C F R § 1 18 at the Mailing of the Notice of Allowance

2. [X] **Payment Enclosed:**
[X] Check [ ] Money Order [ ] Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	790	201	395	Utility filing fee	395.00
106	330	206	165	Design filing fee	
107	540	207	270	Plant filing fee	
108	790	208	395	Reissue filing fee	
114	150	214	75	Provisional filing fee	

SUBTOTAL (1) ($) 395.00

2. EXTRA CLAIM FEES

	Extra Claims		Fee from below	Fee Paid
Total Claims 17	-20** = 0	X		= 0.00
Independent Claims 2	- 3** = 0	X		= 0.00
Multiple Dependent				= 0.00

**or number previously paid, if greater, For Reissues, see below

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	22	203	11	Claims in excess of 20
102	82	202	41	Independent claims in excess of 3
104	270	204	135	Multiple dependent claim, if not paid
109	82	209	41	** Reissue independent claims over original patent
110	22	210	11	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 395.00

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	950	217	475	Extension for reply within third month	
118	1,510	218	755	Extension for reply within fourth month	
128	2,060	228	1,030	Extension for reply within fifth month	
119	310	219	155	Notice of Appeal	
120	310	220	155	Filing a brief in support of an appeal	
121	270	221	135	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,320	241	660	Petition to revive - unintentional	
142	1,320	242	660	Utility issue fee (or reissue)	
143	450	243	225	Design issue fee	
144	670	244	335	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Petitions related to provisional applications	
126	240	126	240	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	790	246	395	Filing a submission after final rejection (37 CFR 1.129(a))	
149	790	249	395	For each additional invention to be examined (37 CFR 1 129(b))	

Other fee (specify) _____
Other fee (specify) _____

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 0.00

SUBMITTED BY

Typed or Printed Name	Bradford G. Addison			Reg. Number	41,486
Signature		Date	10/5/98	Deposit Account User ID	

Complete (if applicable)

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PATENT APPLICATION TRANSMITTAL LETTER

Assistant Commissioner for Patents
Box Patent Applications
Washington, D.C. 20231

Sir:

Transmitted herewith for filing is the continuation patent application of: David C. May
Attorney Docket No. 1020-0501

For: Highly Drapable Protective Cover Having Ultrathin Non-Woven Absorbent Layer

Enclosed are also:

* Continuation Patent Application (16 pages of text)
* 3 sheets of formal drawings (2 sets)
* PTO/SB/05 Utility Patent Application Transmittal
* PTO/SB/17 Fee Transmittal
* Unexecuted Declaration and Power of Attorney for Patent Application
* Unexecuted Statement of Small Entity Status-Inventor
* Unexecuted Statement of Small Entity Status- Small Business
* Check in the amount of $ 395.00
* One return postcard

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Indianapolis, Indiana 46204-5130

Certificate of Mailing by "Express Mail"
"Express Mail" Mailing label Number EL080826574US
Date of Deposit October 5, 1998

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Bradford G. Addison
(Typed or printed name of Person Mailing Paper or Fee)

(Signature of Person Mailing Paper or Fee)

CLAIMS AS FILED

For	Number Filed	Number Extra	Rate	Fee
Basic Fee				$ 395
Total Claims	17-20	0	$ 11	$ 0
Independent Claims	2-3	0	$ 41	$ 0
Multiple Dependent Claims	any		$135	$ 0
Total Filing Fee				$ 395.00

Express Mail No. **EL080826574US**
Applicant: **David C. May**
Docket No. **1020-0501**

* Our check in the amount of $ 395.00 to cover the filing fee for a patent application which includes the above-identified number of claims is enclosed.

* Please charge any deficiency or credit any overpayment to Deposit Account No. 13-0014, but not to include any payment of issue fees.

Respectfully Submitted,

Bradford G. Addison
Registration No. 41,486

October 5, 1998

HIGHLY DRAPABLE PROTECTIVE COVER HAVING ULTRATHIN NON-WOVEN ABSORBENT LAYER

This application is a continuation of co-pending Application Serial No. 08/576,112, filed December 21, 1995.

Background of the Invention

The present invention generally relates to a method and apparatus for protecting an object, surface, or the like. The present invention particularly relates to a protective cover having a plurality of layers. The present invention more particularly relates to a protective cover having a non-woven absorbent layer.

Protective covers, such as drop cloths, are used in conjunction with activities which may result in damage to objects in the environment where the activity is taking place. For example, the surface of walkways, patios, decks, carpet, and furniture needs to be protected when applying fluid products, such as paint, paint products, cleaners, varnish or wall-paper paste to nearby surfaces.

Heretofore, drop cloths have been made from sheets of cotton, cotton blended fabrics, paper, paper-plastic combinations, or plastic which are draped, or otherwise placed around the objects requiring protection from fluid spatterings. While prior art drop cloths afford a certain amount of protection they do have certain disadvantages.

Cotton or cloth-based drop cloths tend to be permeable to certain types of fluid, thereby allowing the fluid to pass through and contact the surface to be protected. Moreover, these types of drop cloths tend to be relatively heavy and cumbersome to handle.

Drop cloths made from sheets or films of plastic do not absorb some fluids well, particularly water based paints. As a result of their poor absorption characteristics, spilled fluids form slippery and slow drying wet spots thereby creating a hazard to the user. Moreover, the fluid forming these wet spots can

come in contact with the soles of shoes and be tracked to other surfaces. An additional disadvantage is that drop cloths constructed from substrates including non-permeable plastic films or sheets are not as flexible as fabric and therefore do not drape well around the objects to be protected. Thin plastic drop cloths have better draping characteristics but are prone to ripping and tearing and therefore are not suited for covering abrasive objects such as concrete or brick.

Drop cloths made from a sheet or film of plastic attached to a sheet of paper, to a large degree, suffer from the same disadvantages as discussed above with reference to plastic sheet drop cloths. That is, sheets of plastic-paper combinations are relatively inflexible, and do not possess absorption characteristics that effectively inhibit the formation of the aforementioned wet spots. As a result, these types of drop cloths do not drape well, and their use increases the chances that the fluid forming the wet spots will be tracked to other surfaces. An additional problem with these types of drop cloths is that the paper sheet is prone to tearing, or tends to separate from the attached plastic backing. These last two problems can become even worse when the paper sheet comes into contact with a fluid.

In light of the above discussion, it is apparent that a light-weight, absorbent, tear resistant, highly drapable protective cover would be desirable. The present invention provides such a protective cover. The cover of the present invention includes a layer of plastic material attached to a layer of non-woven fabric material. The non-woven fabric material being made from fibers randomly interlocked to form a web or mat. Relative to prior art drop cloths formed from sheets or films of materials, such as paper or plastic, the cover of the present invention has a large permeable surface area resulting from the large number of intertwined individual fibers used to form the non-woven layer. One advantage of having a layer made from individual non-woven fibers is that

spilled liquids are quickly absorbed and dispersed throughout the fiber matrix. Moreover, once absorbed, the liquids are retained in the non-woven layer where they quickly dry out, thereby minimizing any chance that they will be tracked to other surfaces.

Another advantage of the present invention is that the fibers used to form the non-woven layer are light-weight, flexible, and capable of withstanding significant tensile forces. Therefore, the protective cover of the present invention is also light-weight, resistant to tearing or puncturing, and is highly drapable.

Summary of the Invention

In accordance with one embodiment of the present invention, there is provided a method of protecting an object during application of a fluid onto a surface. The method includes the following steps, (1) providing a cover having a first layer and a second layer attached together, the first layer including a non-woven fabric material and the second layer including a plastic material, and (2) positioning the cover relative to the object so that the fluid is prevented from contacting the object during application of the fluid onto the surface.

Pursuant to another embodiment of the present invention, there is provided a method of protecting an object during application of a paint product onto a surface. The method includes the following steps, (1) providing a drop cloth having a first layer and a second layer attached together, the first layer including a non-woven fabric material and the second layer including a plastic material, and (2) positioning the drop cloth relative to the object so that the paint product is prevented from contacting the object during application of the paint product onto the surface.

According to yet another embodiment of the present invention, there is provided a drop cloth. The drop cloth includes a first layer having a non-woven fabric material, the first layer having a thickness in the range of 1 to 2 mils. The drop cloth also includes a second layer attached to the first layer, the second layer having a plastic material.

According to still another embodiment of the present invention, there is provided a drop cloth. The drop cloth includes a first layer having a non-woven fabric material, and a second layer attached to the first layer. The second layer having a plastic material. The drop cloth also includes a third layer having a non-woven fabric material attached to the second layer so that the second layer is interposed between the first and third layers.

It is therefore an object of the present invention to provide a new and useful method of protecting a surface from a fluid such as a paint product.

It is moreover an object of the present invention to provide an improved method of protecting a surface from a fluid such as a paint product.

It is still another object of the present invention to provide a new and useful drop cloth for protecting a surface.

It is also the object of the present invention to provide an improved drop cloth for protecting a surface.

It is yet another object of the present invention to provide a tear resistant cover which is light-weight and highly drapable.

It is still another object of the present invention to provide a cover which absorbs and retains liquids while simultaneously providing a liquid-impervious barrier to objects positioned under the cover.

The above and other objects, features, and advantages of the present invention will become apparent from the following description and attached drawings.

Brief Description of the Drawings

FIG. 1 is a perspective view of a chair covered with a protective cover which incorporates the features of the present invention therein;

FIG. 2 is a perspective view of the protective cover shown in FIG. 1; and

FIG. 3 is an enlarged end view of a portion 3 of the protective cover shown in FIG. 2,

FIG. 4 is an enlarged fragmentary end view of a second embodiment of the present invention.

Detailed Description of the Preferred Embodiment

While the invention is susceptible to various modifications and alternative forms, a specific embodiment thereof has been shown by way of example in the drawings and will herein be described in detail. It should be understood, however, that there is no intent to limit the invention to the particular form disclosed, but on the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the invention as defined by the appended claims.

Referring now to FIG. 1, there is shown a protective cover or drop cloth 10 which incorporates the features of the present invention therein. The drop cloth 10 is shown draped over or covering a chair 12 having a first surface 11. The drop cloth 10 is placed in such a position so as to protect first surface 11 from coming into contact with fluid being applied onto a second surface 13 such as a wall. The fluid can be applied to second surface 13 by methods such as brushing it on, spraying, rolling, wiping it on with a cloth, by eletrostatically depositing it on, or similar methods. Any fluid dripping, splashing, spilling, or the like, off of or around, second surface 13 will contact drop cloth 10 rather than chair 12 thereby protecting first surface 11. However, it should be appreciated

that drop cloth 10 can be used to cover, and thus protect, any other type of object or surface such as sidewalks, decks, bushes, driveways, hardwood floors, carpet and vinyl flooring and the like. The cover 10 of this invention is particularly suitable for protecting such surfaces and objects from paint products such as paint, primer paints, stains, paint thinners, wall paper glue, cleaning solutions, solvents and the like.

As shown in FIGS. 2 and 3, the drop cloth 10 includes a bottom layer 14, and a top layer 16 joined to the bottom layer 14. In the embodiment being described, the bottom layer 14 is formed from a liquid impervious and/or solvent-resistant plastic material such as polyethylene. Alternatively, the bottom layer 14 may be formed from any other liquid impervious plastic materials such as vinyl plastics or polypropylene.

Drop cloth 10 is positioned so that bottom layer 14 is facing the surface to be protected such as surface 11 of chair 12 as shown in FIG. 1. It should be appreciated that bottom layer 14 may be treated to resist slipping across or moving relative to surface 11. One such treatment is to have a layer of adhesive material disposed on bottom layer 14 that facilitates the temporary attachment of bottom layer 14 to surface 11 of chair 12. Preferably, the adhesive material disposed on bottom layer 14 should be adapted so that drop cloth 10 can be repeatedly removed and reattached to surface 11 without disposing additional adhesive material on bottom layer 14. Such an adhesive layer on bottom layer 14 helps drop cloth 10 remain in a stationary position relative to the chair 12 while it is being protected. Moreover, having an adhesive layer disposed on bottom layer 14 and placing bottom layer 14 in contact with carpeting or a floor, would reduce slipping of drop cloth 10 across the carpeting or the floor; especially when the user walks across drop cloth 10.

FIG. 4 shows a drop cloth 20 which incorporates a second embodiment of the present invention. In particular, drop cloth 20 includes a first layer 22, a second layer 24 joined to the first layer 22, and a third layer 26 attached to the first layer 22 such that first layer 22 is interposed between second layer 24 and third layer 26. As will be discussed below, one advantage of adding third layer 26 is that it imparts additional tear or puncture resistance to drop cloth 20.

It should be noted that the following discussion relates to the arrangement of layers as disclosed in reference to drop cloth 10 as shown in FIG 2 and 3. However, it should be appreciated that all of the attributes and characteristics discussed below regarding drop cloth 10 also apply to drop cloth 20 (see FIG. 4). Since top layer 16 of drop cloth 10 is made of the same material as second layer 24 and third layer 26 of drop cloth 20, and bottom layer 14 of drop cloth 10 is made of the same material as first layer 22 of drop cloth 20.

There are two important characteristics provided by the bottom layer 14. Since bottom layer 14 is liquid impervious, liquids that initially come into contact with the top layer 16 of drop cloth 10 are prevented from coming into contact with and thus potentially damaging the underlying object or surface such as surface 11 of chair 12 as shown in FIG. 1. Since bottom layer 14 is also solvent-resistant, solvents (organic, aqueous, etc.) and paints (oil, water-based), which could potentially degrade the bottom layer 14 while being retained in the top layer 16 for an extended period of time are prevented from coming into substantial contact with and thus potentially damaging the underlying object or surface.

The top layer 16 is formed from a non-woven fabric. What is meant herein by the use of the term "non-woven fabric" means any assembly of synthetic fibers randomly interlocked and/or held together to form a web or mat, or any assembly of natural fibers randomly interlocked and/or held together to

form a web or mat. In addition, the term "non-woven fabric" includes an assembly having a mixture of fibers chosen from the group of mixtures consisting of (1) synthetic fibers and natural fibers, (2) synthetic fibers and paper fibers, and (3) natural fibers and paper fibers, randomly interlocked and/or held together in a web or mat. The fibers of a non-woven assembly can be held together by mechanical interlocking, by fusing the fibers together, by bonding the fibers together with a cementing medium such as starch, glue, casein, rubber latex, or a cellulose derivative or synthetic resin, or by a combination of these techniques.

It should be noted that the aforementioned random characteristic of the non-woven fabric material describes the manner in which the fibers of the fabric material are bound or connected together. However, it should be appreciated that the fibers of the non-woven material can be oriented in any manner, including a predetermined orientation. For example, the fibers of the non-woven material may be oriented in a unidirectional orientation (fibers are predominantly oriented in the machine direction), or a crosslaid orientation (fibers are predominantly oriented in the crosslaid direction). The fibers can also be oriented in a random orientation.

Synthetic fibers used to make the non-woven fabric of the present invention are herein defined to include: (1) any thermoplastic or thermosetting fiber or any fiber formed when a solid substance is first changed to a liquid, and then converted back into a solid form again to produce a fiber, (2) any regenerated fiber, such as rayon, made from chemically treated cellulose, where the cellulose is treated with known chemicals to yield a viscous solution, and then forced through the holes of a spinneret where it solidifies to yield a fiber, (3) any spun bonded or melt blown fibers, or (4) any fiber or spinnable fiber produced by any extrusion molding technique including the following extrusion

molding techniques: (1) a dry spinning extrusion molding technique where a polymer solution in a solvent is forced through tiny holes into warm air, where the solvent evaporates in the warm air, and the liquid stream solidifies into a continuous filament, (2) a wet spinning extrusion molding technique where a polymer solution is forced through tiny holes into another solution where it is coagulated into a continuous filament, and (3) a melt spinning extrusion molding technique where a solid polymer is melted and forced through tiny holes into cool air which solidifies it into a continuous filament. The above definition of synthetic fibers includes rayon fibers, acetate fibers, polyamide fibers, polyester fibers, acrylic fibers, polyvinyl fibers, spandex fibers and olefin fibers such as polyethylene and polypropylene fibers. Polyester and/or rayon fibers are particularly suited for forming the non-woven fabric of the present invention.

As previously discussed, "non-woven fabric" material can be formed from any assembly of natural fibers randomly held together in a web or mat. What is meant herein by the term "natural fibers" is (1) any protein based fiber such as wool, (2) any cotton fiber, (3) any of the agave fibers, or (4) any fiber obtained from the stalks of plants botanically known as *Corchorus capsularis* and/or *Corchorus olitorius* (also known as bast fibers). The bast fibers include jute fibers, flax fibers, linen fibers, hemp fibers, ramie fibers, sunn fibers, kenaf fibers, and urena fibers. Preferably, fibers used to produce the non-woven fabric material of the present invention are equal to or greater than 0.5 inches long.

It should be noted that the definition of natural fibers as used herein does not include paper fibers. Therefore, the definition of a "non-woven fabric" as used herein does not include an assembly consisting of only paper fibers which are randomly held together in a web or mat. Such an assembly of paper fibers generally has poor fluid absorption characteristics as compared to the "non-woven fabrics" used in the present invention. Therefore, fluids spilled on

assemblies or sheets of only paper fibers (whether or not used in combination with a plastic layer) form slow drying wet spots, and these wet spots increase the likelihood that the spilled fluid will be tracked to other surfaces. Moreover, sheets consisting of only paper fibers are typically not as drapable or tear resistant as the "non-woven fabrics" contemplated by the present invention. However, it should be appreciated that mixtures of (1) natural fibers and paper fibers, or (2) synthetic fibers and paper fibers, are included in the definition of a "non-woven fabric" material. This is due to the inherent characteristics of "synthetic fibers" and "natural fibers" included in the aforementioned mixtures.

The non-woven layer of the present invention preferably has a thickness in the range of 1 to 2 mils. The advantage of having a non-woven layer in the aforementioned thickness range is that the layer is thick enough to absorb and laterally disperse fluid it comes into contact with, but remains pliable enough to be very drapable.

The non-woven fabric of the present invention can be produced by any manufacturing system including: (1) the dry laid system, (2) the wet laid system, or (3) the polymer laid system. With the dry laid system, the fabric structure is formed by having the fibers manipulated while in a dry state. The two different methods which can be used in the dry laid system include (a) the air laid method (web formed by manipulating fibers by air) and (b) the carded method (web formed by a carding machine). With the wet laid system, the fabric structure is formed by having the fibers in liquid environment and then removing the liquid once the fibers are placed onto a screen. With the polymer laid system, the fabric structure is formed by having thermoplastic fibers, upon being extruded, blown by a gas onto a collection surface. The methods used in the polymer laid system include the (a) continuous filament, and (b) the non-continuous filament methods. Non-woven fabrics suitable for use in the present invention are

commercially available from Freudenberg Nonwoven Inc. located in Chelmsford, Massachusetts. One such non-woven fabric product available from Freudenberg is known as product no. D.C. 1000.

The non-woven top layer 16 can include individual fiber filaments which may be heat fused together by using known manufacturing techniques which relate to the temperature and pressure of the process. Alternatively, fiber filaments of the non-woven fabric may be mechanically linked together, or linked together using known chemical bonding processes.

The inherent characteristics of the non-woven fibers forming the top layer 16 imparts certain desirable characteristics to drop cloth 10. These characteristics include; (1) allowing the drop cloth 10 to "stretch" before tearing or being punctured if it is pulled over a sharp surface, or if a shearing force is applied by an object (i.e. ladder, shoe) that is placed on or dragged across the drop cloth 10, and (2) the top layer 16 (and therefore the drop cloth 10) advantageously exhibits high drapability properties. That is, unlike some prior art drop cloths having sheet or film layers, the drop cloth 10, when covering an object such as the chair 12, substantially conforms to the dimensions and/or contours of the object, thus improving the protective properties of the drop cloth.

Furthermore, the absorbent fibers forming, and the three dimensional structure of, the non-woven top layer 16 permit the top layer 16 to quickly retain liquids that contact the top layer 16, and then disperse the liquid laterally across the top layer 16. Therefore, liquids that are retained in the top layer 16 quickly evaporate or dry out because of the absorbent and dispersing nature of the top layer 16. These characteristics of the top layer 16 advantageously permit the drop cloth 10 to resist sticking to an object, such as a shoe sole, which can be hazardous to the user. The aforementioned characteristics also advantageously permit the drop cloth 10 to resist or minimize tracking any absorbed fluid across

other surfaces when an object, such as a wheel or shoe sole, is placed on or dragged across the top layer 16.

In the embodiment being described, the bottom layer 14 is attached to the top layer 16 by fusing or hot melting the bottom layer 14 onto the top layer 16 to form the drop cloth 10. The fusing of the bottom layer 14 to the top layer 16 can be accomplished by using any suitable heat bonding technology such as by passing the superimposed top layer 16 and bottom layer 14 through a nip of a pair of opposed bonding rollers and applying an appropriate amount of heat and pressure to effect a fusion bonding of the bottom layer 14 to the top layer 16. Alternatively, the bottom layer 14 and top layer 16 may be attached with a gluing or cementing medium of the type mentioned above. However, certain adhesive compounds may be susceptible to degradation when exposed to particular liquids or solvents. Thus, the bottom layer 14 could possibly separate from the top layer 16 when such an adhesive is used. In either case, a highly drapable, light-weight yet durable, highly absorbent protective cover is formed by joining the non-woven top layer 16 with the bottom layer 14.

While the invention has been illustrated and described in detail in the drawings and foregoing description, such illustration and description is to be considered as exemplary and not restrictive in character, it being understood that only the preferred embodiments have been shown and described and that all changes and modifications that come within the spirit of the invention are desired to be protected.

What is claimed is:

1. A drop cloth, comprising:

a first layer having a non-woven fabric material, said non-woven fabric material includes natural fibers; and

a second layer attached to said first layer, said second layer having a plastic material,

wherein said first layer has a thickness, and

wherein said thickness is less than 10.0 mils.

2. The drop cloth of claim 1, wherein said thickness is in the range of 1 to 2 mils.

3. The drop cloth of claim 1, wherein said natural fibers include cotton fibers.

4. The drop cloth of claim 1, wherein said non-woven fabric material has fibers which are oriented in a predetermined pattern.

5. The drop cloth of claim 1, wherein said non-woven fabric material has fibers which are oriented in a random pattern.

6. The drop cloth of claim 1, wherein said non-woven fabric material has fibers which are fused together.

7. The drop cloth of claim 1, wherein said second layer is fused to said first layer.

8. The drop cloth of claim 1, wherein said second layer comprises polyethylene.

9. The drop cloth of claim 1, wherein said second layer has an adhesive material disposed thereon.

10. A drop cloth, comprising:

a first layer having a non-woven fabric material, said non-woven fabric material includes rayon fibers; and

a second layer attached to said first layer, said second layer having a plastic material,

wherein said first layer has a thickness, and

wherein said thickness is less than 10.0 mils.

11. The drop cloth of claim 10, wherein said thickness is in the range of 1 to 2 mils.

12. The drop cloth of claim 10, wherein said non-woven fabric material has fibers which are oriented in a predetermined pattern.

13. The drop cloth of claim 10, wherein said non-woven fabric material has fibers which are oriented in a random pattern.

14. The drop cloth of claim 10, wherein said non-woven fabric material has fibers which are fused together.

15. The drop cloth of claim 10, wherein said second layer is fused to said first layer.

16. The drop cloth of claim 10, wherein said second layer comprises polyethylene.

17. The drop cloth of claim 10, wherein said second layer has an adhesive material disposed thereon.

Abstract of said Disclosure

A method of protecting an object during application of a fluid onto a surface. The method includes the following steps, (1) providing a cover having a first layer and a second layer attached together, the first layer including a non-woven fabric material and the second layer including a plastic material, and (2) positioning the cover relative to the object so that the fluid is prevented from contacting the object during application of the fluid onto the surface. A drop cloth having a first layer which includes a non-woven fabric material, and a second layer which includes a plastic material, is also disclosed.

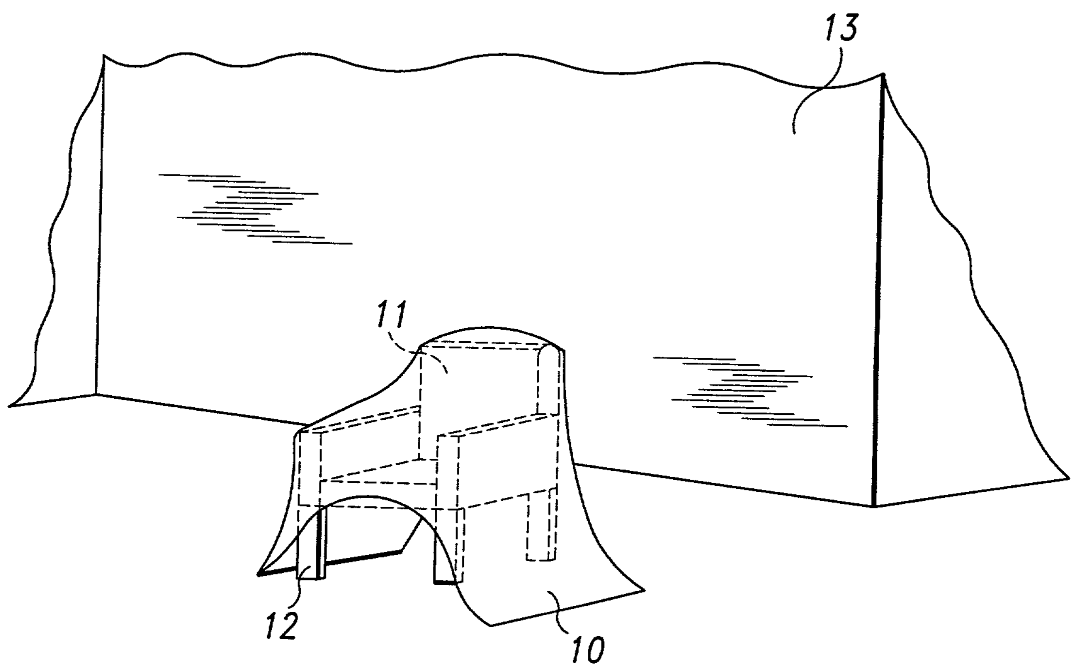

Fig. 1

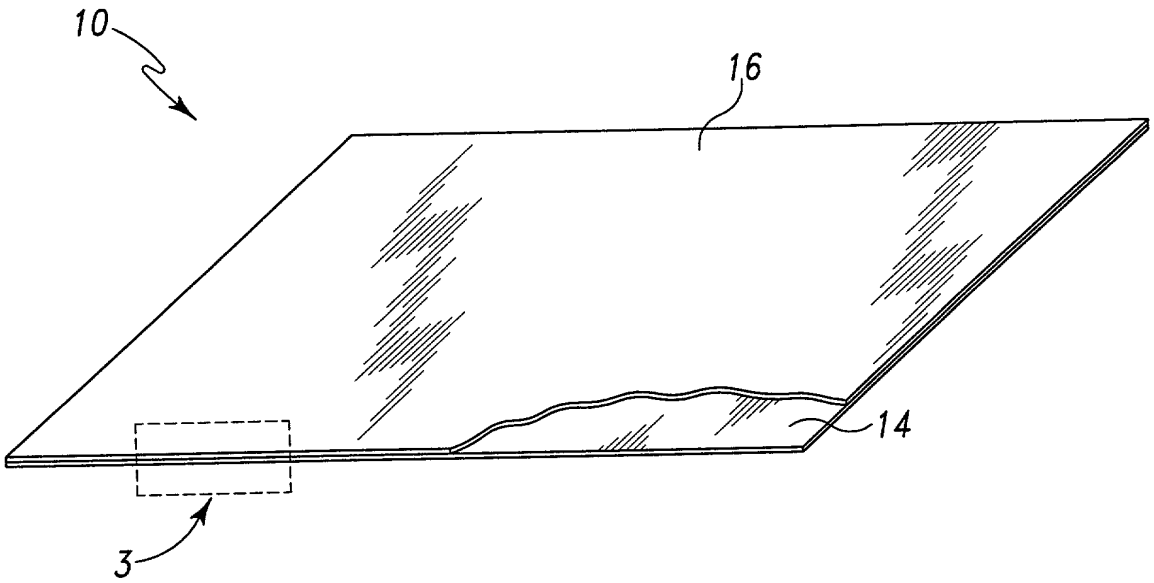

Fig. 2

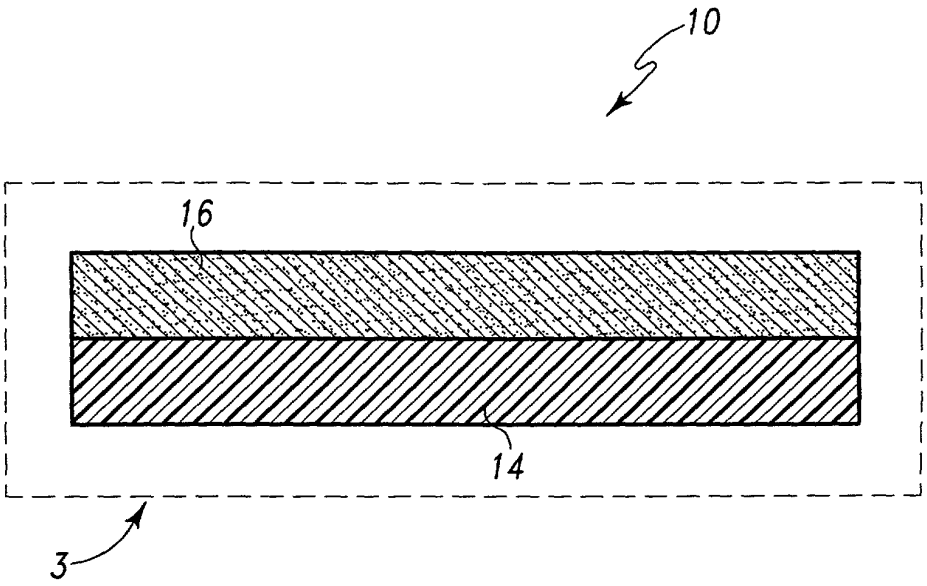

Fig. 3

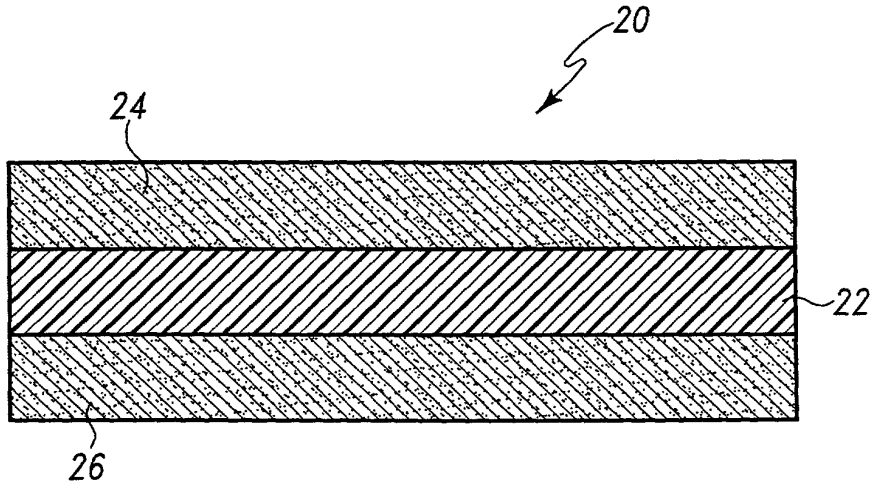

Fig. 4

DECLARATION AND POWER OF ATTORNEY

As below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled **HIGHLY DRAPABLE PROTECTIVE COVER HAVING ULTRATHIN NON-WOVEN ABSORBENT LAYER ,** the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulation, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)	(Filing Date)	(Status) (Patented, Pending, Abandoned)
(Application Serial No.)	(Filing Date)	(Status) (Patented, Pending, Abandoned)
(Application Serial No.)	(Filing Date)	(Status) (Patented, Pending, Abandoned)

I hereby appoint the following to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Paul J. Maginot, Registration No. 34,984
Bradford G. Addison, Registration No. 41,486
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole inventor: David C. May

Inventor's signature: _____

Date: _____

Residence: 3543 Hamstead Court
Durham, North Carolina 27702

Citizenship: United States of America

Post Office Address: same as above

Applicant(s) or Patentee(s): David C. May Attorney Docket No. 1020-0501
Appl. or Patent No.: to be assigned
Filed or Issued: filed herewith
For: **HIGHLY DRAPABLE PROTECTIVE COVER HAVING ULTRATHIN NON-WOVEN ABSORBENT LAYER**

Verified Statement (Declaration) Claiming Small Entity Status
(37 C.F.R. §§ 1.9(d) and 1.27(c)) -- Small Business Concern

I hereby declare that I am

[ ] the owner of the small business concern identified below:
[X] an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN D.C. May Corporation
ADDRESS OF SMALL BUSINESS CONCERN 215 Morris Street, Durham, NC 27702

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 C.F.R. § 121.3-18, and reproduced in 37 C.F.R. § 1.9 (d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled **HIGHLY DRAPABLE PROTECTIVE COVER HAVING ULTRATHIN NON-WOVEN ABSORBENT LAYER** by inventor(s) David C. May described in

[X] the specification filed herewith
[ ] application no. _____, filed _____
[ ] patent no. _____, issued _____

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 C.F.R. § 1.9(c) if that person made the invention or by any concern which would not qualify as a small business concern under 37 C.F.R. § 1.9(d) or a nonprofit organization under 37 C.F.R. §1.9(e).

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 C.F.R. § 1.27)

NAME _____
ADDRESS _____
( ) INDIVIDUAL ( ) SMALL BUSINESS CONCERN ( ) NONPROFIT ORGANIZATION
NAME _____
ADDRESS _____
( ) INDIVIDUAL ( ) SMALL BUSINESS CONCERN ( ) NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. § 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING David C. May
TITLE IN ORGANIZATION President
ADDRESS OF PERSON SIGNING 215 Morris Street, Durham, NC 27702

SIGNATURE _____ DATE _____

Applicant or Patentee: David C. May Attorney Docket No: 1020-0501
Appl. or Patent No.: to be assigned
Filed or Issued: filed herewith
For: **HIGHLY DRAPABLE PROTECTIVE COVER HAVING ULTRATHIN NON-WOVEN ABSORBENT LAYER**

Verified Statement (Declaration) Claiming Small Entity Status
(37 C.F.R. §§ 1.9(c) and 1.27(b)) - Independent Inventor

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 C.F.R. § 1.9(c) for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, with regard to the invention entitled **HIGHLY DRAPABLE PROTECTIVE COVER HAVING ULTRATHIN NON-WOVEN ABSORBENT LAYER** described in

[X] the specification filed herewith
[ ] application no. _____, filed _____
[ ] patent no. _____, issued _____

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 C.F.R. § 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 C.F.R. § 1.9(d) or a nonprofit organization under 37 C.F.R. § 1.9(e).

Each person, concern or organization to which I have assigned, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

[ ] no such person, concern, or organization
[X] persons, concerns or organizations listed below*

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 C.F.R. § 1.27)

NAME D.C. May Corporation
ADDRESS 215 Morris Street. Durham NC 27702
( ) INDIVIDUAL (X) SMALL BUSINESS CONCERN ( ) NONPROFIT ORGANIZATION

NAME _____
ADDRESS _____
( ) INDIVIDUAL ( ) SMALL BUSINESS CONCERN ( ) NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. § 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

David C. May
Name of Inventor

_____ Date: _____
Signature of Inventor